IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A method of generating, from a single view input image, a depth map ~~(122)~~ comprising depth values representing distances to a viewer, for respective pixels of ~~an~~ the image ~~(100)~~, the method comprising:

[[-]] computing cost values that comprise respective measures of a number of and extent of transitions in luminance and/or color and/or color components for pixels of the image on a path related to a spatial disposition of objects in the image, wherein said computing includes computing a cost value for a first one of the pixels ~~(108)~~ of the image by ~~combining~~ determining transitions between image segments based on differences between luminance and/or color values of pairs of neighboring connected pixels at transitions which are disposed on a path ~~(112)~~ from the first one of the pixels ~~(108)~~ to a second one of the pixels ~~(110)~~, wherein the second one of the pixels belongs to a predetermined subset of the pixels of the image; and

[[-]] assigning a ~~first one of the~~depth value in a first group of depth values corresponding to the first one of the pixels ~~(108)~~ on basis of the cost value so that pixels belonging to the same image segment are assigned the same group of depth values.

2. (Currently Amended) ~~A~~ The method as claimed in claim 1, wherein the predetermined subset comprises one selected from the

group ~~consistion~~ consisting of (i) pixels which are located at a border of the image, (ii) pixels of a part of the border, and (iii) a central pixel of the image.

3. (Currently Amended) ~~A~~ The method as claimed in claim 1, wherein a first one of the differences is equal to a difference between respective values of neighboring pixels which are disposed on the path ~~(112)~~.

4. (Currently Amended) ~~A~~ The method as claimed in claim 1, wherein a second one of the differences is equal to an absolute value of difference between respective values of neighboring pixels which are disposed on the path ~~(112)~~.

5. (Currently Amended) ~~A~~ The method as claimed in claim 1, wherein the values of pixels corresponds to one of luminance and color.

6. (Currently Amended) ~~A~~ The method as claimed in claim 1, wherein the cost value for the first one of the pixels ~~(108)~~ is computed by accumulating the differences between the values of the pixels which are disposed on the path ~~(112)~~.

7. (Currently Amended) ~~A~~ The method as claimed in claim 1, wherein the cost value for the first one of the pixels ~~(108)~~ is computed by accumulating the differences between the values of the

pixels which are disposed on the path ~~(112)~~, the differences being larger than a predetermined threshold.

8. (Currently Amended) ~~A~~ The method as claimed in claim 1, wherein the cost value for the first one of pixels is computed by accumulating products of differences between the values of the pixels which are disposed on the path ~~(112)~~ and respective weighting factors for the differences.

9. (Currently Amended) ~~A~~ The method as claimed in claim 8, wherein a first one of the weighting factors which is related to a difference between a value of a particular pixel and a value of its neighboring pixel, is based on a distance between the particular pixel and the first one of the pixels ~~(108)~~.

10. (Currently Amended) ~~A~~ The method as claimed in claim 8, wherein a second one of the weighting factors which is related to a difference between a value of a particular pixel and a value of its neighboring pixel, is based on the location of the neighboring pixel related to the particular pixel.

11. (Currently Amended) ~~A~~ The method as claimed in claim 1, ~~which~~ wherein said method further comprises:

[[-]] computing a second cost value for the first one of the pixels ~~(108)~~ of the image by combining differences between values of pixels which are disposed on a second path ~~(202)~~ from the first

one of the pixels ~~(108)~~ to a third one of the pixels ~~(204)~~ which belongs to the predetermined subset of the pixels of the image;

[[-]] determining the minimum of the cost value and the second cost value;

[[-]] assigning the first one of the depth values corresponding to the first one of the pixels (108) on basis of the minimum.

12. (Currently Amended) ~~A~~ The method as claimed in claim 1, ~~which~~ wherein said method further comprises:

computing a second cost value for a third one of the pixels on basis of the cost value for the first one of the pixels.

13. (Currently Amended) ~~A~~ The method as claimed in claim 12, ~~comprising~~ wherein said step of computing the second cost value ~~by~~ comprises combining the cost value of the first one of the pixels with a difference between further values of further pixels which are disposed on a second path from the third one of the pixels to the first one of the pixels.

14. (Currently Amended) ~~A~~ The method as claimed in claim 12, wherein cost values corresponding to respective pixels of the image are successively computed on basis of further cost values being computed for further pixels, a first scan direction of successive computations of cost values for a first row of pixels of the image being opposite to a second scan direction of successive

computations of cost values for a second row of pixels of the image.

15. (Currently Amended) A depth map generating unit ~~(401)~~ for generating, from a single view input image, a depth map ~~(122)~~ comprising depth values representing distances to a viewer, for respective pixels of ~~an~~ the image ~~(100)~~, the generating unit comprising:

[[-]] computing means for computing cost values that comprise respective measures of a number of and extent of transitions in luminance and/or color and/or color components for pixels of the image on a path related to a spatial disposition of objects in the image, wherein said computing includes computing a cost value for a first one of the pixels ~~(108)~~ of the image by ~~combining~~ determining transitions between image segments based on differences between luminance and/or color values of pairs of neighboring connected pixels at transitions which are disposed on a path ~~(112)~~ from the first one of the pixels ~~(108)~~ to a second one of the pixels ~~(110)~~, wherein the second one of the pixels belongs to a predetermined subset of the pixels of the image; and

[[-]] assigning means for assigning ~~a first one of the~~ a depth value in a first group of depth values corresponding to the first one of the pixels ~~(108)~~ on basis of the cost value so that pixels belonging to the same image segment are assigned the same group of depth values.

16. (Currently Amended) An image processing apparatus ~~(500)~~ comprising:

[[-]] receiving means ~~(502)~~ for receiving a signal corresponding to an image ~~(100)~~; and

[[-]] a depth map generating unit (401) for generating, from a single view input image, a depth map ~~(122)~~, wherein said depth map generating unit includes computing means for computing cost values that comprise respective measures of a number of and extent of transitions in luminance and/or color and/or color components for pixels of the image on a path related to a spatial disposition of objects in the image, wherein said computing includes computing a cost value for a first one of the pixels (108) of the image by determining transitions between image segments based on~~combining~~ differences between values of pairs of neighboring connected pixels at transitions which are disposed on a path ~~(112)~~ from the first one of the pixels ~~(108)~~ to a second one of the pixels ~~(110)~~, wherein the second one of the pixels belongs to a predetermined subset of the pixels of the image, and assigning means for assigning a ~~first one of the~~depth value in a first group of depth values corresponding to the first one of the pixels ~~(108)~~ on basis of the cost value so that pixels belonging to the same image segment are assigned the same group of depth values.

17. (Currently Amended) A computer-readable medium, comprising instructions stored thereon for execution by a computer to generate, from a single view input image, a depth map ~~(122)~~ of

depth values representing distances to a viewer, for respective pixels of ~~an~~ the image ~~(100)~~, the computer comprising processing means and a memory, the computer-readable medium, after being loaded, providing said processing means with the capability to carry out:

[[-]] computing cost values that comprise respective measures of a number of and extent of transitions in luminance and/or color and/or color components for pixels of the image on a path related to a spatial disposition of objects in the image, wherein said computing includes computing a cost value for a first one of the pixels (108) of the image by determining transitions between image segments based on~~combining~~ differences between values of pairs of neighboring connected pixels at transitions which are disposed on a path ~~(112)~~ from the first one of the pixels ~~(108)~~ to a second one of the pixels ~~(110)~~, wherein the second one of the pixels which belongs to a predetermined subset of the pixels of the image; and

[[-]] assigning a depth value in a first group of~~first one of the~~ depth values corresponding to the first one of the pixels ~~(108)~~ on basis of the cost value so that pixels belonging to the same image segment are assigned the same group of depth values.